Elsevier Editorial System(tm) for
Personality and Individual Differences
Manuscript Draft

Manuscript Number: PAID-D-17-00282R1

Title: Psychopathy and Impulsivity: The relationship of the Triarchic model of psychopathy to different forms of impulsivity in offenders and community participants

Article Type: Full Length Article

Section/Category: Research Paper (<5000 words)

Keywords: UPPS, TriPM, Boldness, Meanness, Disinhibition

Corresponding Author: Dr. Kathrin Weidacker,

Corresponding Author's Institution: Swansea University

First Author: Kathrin Weidacker

Order of Authors: Kathrin Weidacker; Katherine R O'Farrell; Nicola S Gray; Stephen J Johnston; Robert J Snowden

Abstract: Psychopathic individuals are considered to be impulsive, but impulsivity is a multifaceted construct (including positive and negative urgency, lack of planning, lack of perseverance, sensation seeking). We investigated the relationships between the Triarchic Psychopathy Model (TriPM), conceptualising psychopathy in terms of: Boldness, Meanness, and Disinhibition, and UPPS-P Impulsivity. Prison and community participants were examined to assess for consistency in relationships between psychopathic traits and impulsivity across these samples. Boldness related to high sensation seeking, but to low negative urgency and strong perseverance. Disinhibition related to high levels of negative/ positive urgency, and poor planning. Meanness was linked to most forms of impulsivity. While the samples showed small differences (higher Sensation Seeking for the community sample, and greater TriPM Disinhibition for the offenders), there were no differences in the relationships between TriPM and UPPS-P. The findings support the dimensional model of psychopathy and demonstrate that some aspects of psychopathy are related to reduced impulsivity. This might explain why some psychopathic offenders are able to commit instrumental violence or criminal behaviour that requires a high level of planning and persistence.

Prifysgol Abertawe
Swansea University

March 29th, 2017

Dear Editor,

Thank you for the comments to our paper. We have made the changes requested and have detailed them below. For your convenience we have italicized the comments of the reviewer and have typed our response in red below each one.
Word count: 4526

Kind regards,

Dr. Kathrin Weidacker

Thank you for the comments to our paper. We have made the changes requested and have detailed them below. For your convenience we have italicized the comments of the reviewer and have typed our response in red below each one.

Reviewer #2: The article is really well written and is easy to read, compliments to the authors for their writing style.

1. *In one of the main analyses, the linear regression analyses, the samples of college students and male prisoners are even combined, which I find kind of odd. I would suggest to perform this analysis for both samples separately.*
   We have addressed the mentioned issue throughout the manuscript. We now refer to the sample as prison/offender sample (also in the title). Further, we envisage psychopathy as a dimensional construct instead of being of categorical nature (Walters et al., 2007), and as such relying on a between-group design might not necessarily be appropriate when investigating the link between psychopathic traits and impulsivity levels. To address the request of the reviewer, we have presented the data in table 3 now in both ways, per sample as well as in the combined sample (please see table 3 due to the landscape formatting).

   We also refer in the results section to the outcomes of these analyses (page 10, line 1 to page 11 line16):
   " 3.3 **Regression Analyses – Triarchic Model**
   First, we examined each of the five impulsivity measures by regressing the three scales of the TriPM onto the measure of impulsivity within the combined sample and the individual samples (see Table 3). Second, differences between groups were analysed by means of hierarchical regression.
   3.3.1 Negative Urgency. Examination of the significant model predicting NU based on the three TriPM subscales showed that the Disinhibition scale was strongly positively related to NU, whereas the Boldness scale expressed a negative relationship. The Meanness scale was not significant in the regression model and did not have unique predictive value, indicating the lack of a significant association with NU. Those results were merely identical in prisoners and community participants.
   3.3.2 Positive Urgency. Examination of the significant model predicting PU based on the triarchic conceptualization of psychopathy revealed that while both the Meanness and Disinhibition scales were positively related to PU (the former more strongly in the community sample), the Boldness scale did not express a significant correlation and did not add to the model's predictive ability in both samples.
   3.3.3 Lack of Premeditation. The regression model predicting LPm from the TriPM scales was significant. Examination of this model showed that both the Meanness and Disinhibition scales were positively related to LPm, whereas the Boldness scale did not express a significant correlation. Similarly to Positive Urgency, the relationship between LPm and Meanness was stronger in the community sample whereas the Boldness and Disinhibition results were equivalent in both samples.
   3.3.4 Lack of Perseverance. Examining the significant model predicting LPs based on the TriPM scores showed that the Meanness scale was positively related to LPs, whereas the Boldness scale expressed a negative correlation. There was no significant contribution from the Disinhibition scale to the model, despite a significant positive zero-order correlation to LPs. When analysing the relationships between TriPM and UPPS-P scales in the individual samples, the results were equivalent.
   3.3.5 Sensation Seeking. Predicting SS from the scales of the TriPM resulted in significance of the overall model. Further examination showed that both the Boldness scale and the Meanness

scale were positively related to SS, whereas there was no significant contribution from the Disinhibition scale to the model fit, nor was there a significant correlation to SS. Similarly to LPs, the results were not affected when the samples were analysed individually.

To examine whether differences between groups in their relationship between impulsivity and TriPM psychopathy were of statistical significance, hierarchical regression was applied. For each of the scales of the UPPS-P we examined the contribution of the nature of the group (offender vs. community) using the same hierarchical regression technique as we did for the total TriPM score, but replacing the predictors with the simultaneous entry of the three TriPM scales at Stage 2 and the interaction between the scales and the group variable at Stage 3."

2. *When considering the relation between the Triarchic model of psychopathy and the UPPS, I would have expected a hypothesis about which of the subscales would correlate to which factor of psychopathy and why. This could be inserted just above section 2. methods. The results could then also be organized around these hypotheses.*
   We want to thank the reviewer for this suggestion and have added the following section to the introduction (page 6, line 10 to page 7 line 2):

1.3 Hypotheses

Based on previous research linking the Boldness dimension to the Fearless Dominance concept of the PPI-R (Sellbom et al., 2015), which in turn was found to be related to enhanced levels of UPPS-P Sensation Seeking and Lack of Premeditation (Ray et al., 2009), a positive relationship between TriPM Boldness and UPPS-P Sensation Seeking and Lack of Premeditation was hypothesised. In respect to the Meanness dimension of the TriPM, previous research has found associations between this and the PPI-R Self-Centred Impulsivity as well as the PPI-R Coldheartedness factors (Stanley et al., 2013), which additionally have been found to correlate with all aspects of impulsivity as measured by the UPPS-P (Berg et al., 2015; Ray et al., 2009). As such it was hypothesised that the Meanness dimension of the TriPM will be strongly associated with all forms of impulsivity measured by the UPPS. The third TriPM dimension, Disinhibition, has previously been found to be related to poor planfulness (Patrick, 2010) and to the PPI-R Self-Centred Impulsivity factor (Stanley et al., 2013). Therefore it was hypothesised that TriPM Disinhibition will be positively correlated to all aspects of UPPS-P impulsivity, but especially the Lack of Premeditation sub-scale, given that both relate to a deficit in planning (Lynam et al., 2006; Patrick, 2010).

We further feel that the overlap between hypotheses and statistical results might be better placed in the discussion section where the outcomes are discussed per TriPM scale; this has been incorporated in the present version of the manuscript.

3. *I would suggest not to use the name 'forensic' when referring to an offender sample with no psychiatric characteristics.*
   We have changed the manuscript accordingly: we are referring to the respective sample now as prison or offender sample.

4. *Most significant correlations between psychopathy and impulsivity occur in both samples. This can be considered illustrative of the sampling limitations, because the offender sample probably did not consist of many true psychopaths.*

   We agree with the reviewer in such that the offender sample did likely not consist solely of true psychopaths. Given that the PCL-R scores of the offenders are not available, we have added the following to the limitation section (page 15, lines 6 to 12):
   "Further, the offender sample likely did not only contain participants reaching the cut-off for psychopathy as ascribed to the PCL-R. However, psychopathy is commonly seen as a dimensional construct instead of being of categorical nature (Walters et al., 2007). In light of

this, a dimensional approach (regression) has been taken, which requires psychopathic traits to be expressed across the full range of severity. However, between-group differences might be more pronounced when comparing psychopathic participants reaching the PCL-R cut-off to community participants."

*Title page with author details

Psychopathy and Impulsivity: The relationship of the Triarchic model of psychopathy to different forms of impulsivity in offenders and community participants

Kathrin Weidacker*[a], Katherine R. O'Farrell[b], Nicola S. Gray[ac], Stephen J. Johnston[a] and Robert J. Snowden[b]

[a] School of Human and Health Sciences, Department of Psychology, University of Swansea, Swansea, Wales, United Kingdom.

[b] School of Psychology, Cardiff University, Wales, United Kingdom.

[c] Abertawe Bro Morgannwg University Health Board, United Kingdom.

*Corresponding author. School of Human and Health Sciences, Department of Psychology, University of Swansea, Singleton Park, SA2 8PP Swansea, Wales, United Kingdom. *Email address:* K.Weidacker@gmx.de. *Phone:* 0044-1792295081

***Highlights (for review)**

- Meanness related to all forms of UPPS-P impulsivity
- Boldness related to low negative urgency, but high sensation seeking/ perseverance
- Disinhibition related to high negative/ positive urgency, and poor planning
- Correlations did not differ across forensic and non-forensic samples

Abstract

Psychopathic individuals are considered to be impulsive, but impulsivity is a multifaceted construct (including positive and negative urgency, lack of planning, lack of perseverance, sensation seeking). We investigated the relationships between the Triarchic Psychopathy Model (TriPM), conceptualising psychopathy in terms of: Boldness, Meanness, and Disinhibition, and UPPS-P Impulsivity. Prison and community participants were examined to assess for consistency in relationships between psychopathic traits and impulsivity across these samples. Boldness related to high sensation seeking, but to low negative urgency and strong perseverance. Disinhibition related to high levels of negative/ positive urgency, and poor planning. Meanness was linked to most forms of impulsivity. While the samples showed small differences (higher Sensation Seeking for the community sample, and greater TriPM Disinhibition for the offenders), there were no differences in the relationships between TriPM and UPPS-P. The findings support the dimensional model of psychopathy and demonstrate that some aspects of psychopathy are related to reduced impulsivity. This might explain why some psychopathic offenders are able to commit instrumental violence or criminal behaviour that requires a high level of planning and persistence.

Keywords: UPPS, TriPM, Boldness, Meanness, Disinhibition

1. Introduction

The concept of psychopathy is of great importance to society in general and to forensic psychology and psychiatry in particular due to the high degree of antisocial and criminal activities associated with the disorder. However, the exact definition of the term, and how it is best measured, continues to be an area of debate (e.g., Gatner, Douglas, & Hart, 2016). One example is the role of "impulsivity" as key characteristic of the psychopathic personality. For example, the forensic diagnosis instrument of psychopathy, the Psychopathy Checklist-Revised (PCL-R; Hare, 1991), contains specific items assessing the degree of impulsivity in lifestyle, tendency to seek sensation, and poor behavioural controls, in addition to referring to an absence of considering the future consequences of one's actions.

At first glance, many of the behaviours associated with psychopathy also appear "impulsive" such as promiscuous sexual behaviour, gambling, drug-use and criminal activities (Blaszczynski, Steel, & McConaghy, 1997; Harris, Rice, Hilton, Lalumiere, & Quinsey, 2007; Sylvers, Landfield, & Lilienfeld, 2011). On the other hand, clinicians often report on the ability of psychopathic offenders to plan their crimes and to carefully manipulate others for their own gain. Such behaviours seem to contrast with what would be expected of an impulsive person. Similarly, psychopaths appear to commit far more than their fair share of "instrumental violence" where the violence is planned and committed for some sort of instrumental gain, compared to "reactive violence" where the violence is not planned and appears to arise out of strong emotional states (Cima & Raine, 2009; Woodworth & Porter, 2002).

Research relating self-report measures of impulsivity to psychopathy also fails to provide a consistent view of the relationship between these constructs. For example, Snowden and Gray (2011) measured the relationship between the two most widely used measures of impulsivity and psychopathy, the Barratt Impulsiveness Scale: BIS-11 (Patton,

Stanford, & Barratt, 1995) and the PCL-R, in a sample of personality disordered offenders. They found no significant relationship between the total BIS-11 and the total PCL-R score. However, there is increasing evidence that both the concept of psychopathy and impulsivity are uni-factorial constructs (Poythress & Hall, 2011). The PCL-R, for example, is underpinned by at least two factors (Harpur, Hakstian, & Hare, 1988), covering the interpersonal and affective components (Factor 1) as well as the lifestyle and antisocial components (Factor 2). These factors might also be subdivided into either three (Cooke & Michie, 2001) or four facets (Neumann, Hare, & Pardini, 2015). Returning to the data of Snowden and Gray (2011), it was shown that offenders with high Factor 2 scores on the PCL-R showed higher scores on the BIS-11, while Factor 1 scores were not related to BIS-11 scores.

In terms of self-report measure of psychopathy, the Psychopathic Personality Inventory-Revised (PPI-R; Lilienfeld & Widows, 2005), contains at least two underpinning factors, Fearless Dominance and Self-Centred Impulsivity, and sometimes a third factor of Coldheartedness is isolated (e.g., Berg, Hecht, Latzman, & Lilienfeld, 2015). Given that the PPI-R was designed based on a different conceptualisation of psychopathy than the PCL-R, viewing psychopathy as independent from criminal behaviour, the factors of the PPI-R do not have a simple one-to-one relationship with the factors of the PCL-R (Copestake, Gray, & Snowden, 2011). It seems likely that these different sub-factors may well have different relationships to measures of impulsivity. Hence, an understanding of the relationship between psychopathy and impulsivity must take into account different conceptions of psychopathy and its underlying factors.

Recently, the Triarchic Psychopathy Model (TriPM; Patrick, 2010) was introduced in an effort to integrate the divergent constructs of psychopathy, as for example utilized by the PCL-R and the PPI-R, and to further connect with neurobiological underpinnings. The TriPM

conceptualizes psychopathy in terms of three distinct constructs, Boldness, Meanness, and Disinhibition, which differ in their phenotypes. The Boldness dimension incorporates psychopathic features such as high resilience to pressure and stressors, high social efficacy, and high tolerance to danger as well as unfamiliarity. It shows strong associations with the Fearless Dominance concept of the PPI-R (Sellbom, Wygant, & Drislane, 2015) and some relationship to the interpersonal (Facet 1) and antisocial (Facet 4) scales of the PCL-R (Venables, Hall, & Patrick, 2014). Meanness reflects callousness, aggression, cruelty, lack of empathy, shallow attachment, and general destructive behaviours to seek excitement and personal gain. It is related to the interpersonal (Facet 1), affective (Facet 2) and antisocial (Facet 4) facets of the PCL-R, but also to the PPI-R Self-Centred Impulsivity and Coldheartedness factors (Sellbom & Phillips, 2013; Sellbom et al., 2015; Stanley, Wygant, & Sellbom, 2013). The third dimension, Disinhibition, relates to diminished impulse control, poor self-regulation (especially in terms of negative emotions), and poor planfulness (Patrick, 2010), thereby relating to aspects of the lifestyle (Facet 3) and antisocial (Facet 4) facets of the PCL-R as well as to the PPI-R Self-Centred Impulsivity factor (Stanley et al., 2013; Venables et al., 2014).

1.1 Varieties of Impulsivity

Impulsivity is widely acknowledged to be a multifaceted construct (e.g. Cyders & Coskunpinar, 2012; Evenden, 1999). Taking this into account, the UPPS Impulsive Behavior Scale was developed by means of factor analyses on items included in ten different impulsivity self-report measures (Whiteside & Lynam, 2001). Early results indicated four different aspects of impulsivity, which has later been extended to include a fifth component of impulsivity (UPPS-P; Lynam, Smith, Whiteside, & Cyders, 2006). The Negative Urgency subscale of the UPPS-P reflects impulsive reactions when facing negative emotions and the

ignorance of possible consequences of these impulses. Positive Urgency refers to the tendency to act impulsively when facing positive emotions. Lack of Premeditation involves acting without consideration of potential consequences. Lack of Perseverance indicates an inability to focus on ongoing tasks and complete them. Sensation Seeking relates to the risk seeking component of impulsivity.

1.2 Psychopathy and UPPS

So far, there are few psychopathy studies using the UPPS conception of impulsivity and none relating the UPPS to the triarchic conceptualisation of psychopathy. Varlamov, Khalifa, Liddle, Duggan, and Howard (2011) used the PCL-R to divide male offenders with a personality disorder into low and high psychopathy groups. These two groups did not differ on most of the UPPS scales, with only a significant difference on the Sensation Seeking scale, whereby those in the high psychopathy group had larger Sensation Seeking scores. Ray, Poythress, Weir, and Rickelm (2009) examined the relationship between the PPI-R and UPPS in a mainly male offender sample. The PPI-R Fearless Dominance factor was strongly related to Sensation Seeking with a small correlation to Lack of Premeditation. Self-Centred Impulsivity was significantly related to all UPPS scales.

In terms of male community participants, Miller, Watts, and Jones (2011) related the UPPS-P to the self-report version of the PCL-R – the Self-Report Psychopathy Scale (SRP-III: Williams, Paulhus, & Hare, 2007). The first SRP-III factor, resembling that of Factor 1 of the PCL-R, was solely related to enhanced scores on Positive Urgency. However, the second SRP-III factor, resembling Factor 2 of the PCL-R, was associated to enhanced impulsivity in terms of Positive/Negative Urgency, as well as to Lack of Premeditation. Berg et al. (2015) also examined community participants on the relationships between the UPPS and the PPI-R. Similar to findings in the prison sample investigated by Ray et al. (2009), they found both that Fearless Dominance had a strong relationship with Sensation Seeking, but not with other

UPPS-P scales[1] and that Self-Centred Impulsivity was significantly related to all UPPS scales (Berg et al., 2015).

At present there is no report on how UPPS-P impulsivity is related to the three phenotypes of psychopathy as described via the TriPM. Further, to date no direct comparison of TriPM/UPPS-P relationships between offender and community samples has taken place. We, therefore, measured five aspects of impulsivity via the UPPS-P and the three characteristics of psychopathy embedded in the TriPM in two male samples. Offenders and community participants were compared on their relationships between TriPM psychopathy and UPPS-P impulsivity.

1.3 Hypotheses

Based on previous research linking the Boldness dimension to the Fearless Dominance concept of the PPI-R (Sellbom et al., 2015), which in turn was found to be related to enhanced levels of UPPS-P Sensation Seeking and Lack of Premeditation (Ray et al., 2009), a positive relationship between TriPM Boldness and UPPS-P Sensation Seeking and Lack of Premeditation was hypothesised. In respect to the Meanness dimension of the TriPM, previous research has found associations between this and the PPI-R Self-Centred Impulsivity as well as the PPI-R Coldheartedness factors (Stanley et al., 2013), which additionally have been found to correlate with all aspects of impulsivity as measured by the UPPS-P (Berg et al., 2015; Ray et al., 2009). As such it was hypothesised that the Meanness dimension of the TriPM will be strongly associated with all forms of impulsivity measured by the UPPS. The third TriPM dimension, Disinhibition, has previously been found to be related to poor planfulness (Patrick, 2010) and to the PPI-R Self-Centred Impulsivity factor (Stanley et al., 2013). Therefore it was hypothesised that TriPM Disinhibition will be positively

[1] Other correlations were significant due the large sample size (>1000) but were of a small effect size.

correlated to all aspects of UPPS-P impulsivity, but especially the Lack of Premeditation sub-scale, given that both relate to a deficit in planning (Lynam et al., 2006; Patrick, 2010).

2. Method

2.1 Participants

Male community participants were recruited through the University's participant panel and reimbursed with course credits as part of their degree. The sample consisted of 81 male participants and their age ranged from 18 to 63 years (M = 23.89, SD = 6.75).

Male prisoners (86.7 % White British) were recruited from the Category C prison, HMP Channings Wood in South England. Offenders were excluded when settled within the resettlement and drug therapeutic units, as well as when deemed to be at increased risk of self-harm. The incarcerated sample included 68 male participants (age: M = 41.53 years, SD = 14.06, range 21 - 78 years). The participants age of first conviction ranged between 11 and 65 years (M = 23.93, SD = 12.20) and their duration of imprisonment ranged between 1 and 444 months (M = 60.54, SD = 81.04). In terms of number of previous convictions, the prison sample expressed a range of 0 to 51 (M = 8.63, SD = 11.43), which related to 0 to 126 previous offenses (M = 18.75, SD = 27.50). The index crimes committed were composed of 10.3 % theft/burglary, 2.9 % robbery, 13.2 % drug offenses, 8.8 % assault, 4.4 % murder, 55.9 % sexual offenses, 1.5 % driving-related offenses, 1.5 % fraud, and 1.5 % miscellaneous minor charges (e.g. mischief). These index crimes related to 48.5 % violent and 51.5 % non-violent offenses.

Ethical approval for the community sample was obtained from the Ethical Committee of XX. For the offender sample, ethical approval was obtained from XX Ethical Committee as well as from the National Offender Management System. All participants gave informed, written consent prior to study participation.

2.2 Assessments

2.2.1 The UPPS-P Impulsive Behaviour Scale. The UPPS-P (Lynam et al., 2006) is a 59-item self-report questionnaire, being scored on a four-point Likert scale ranging from "*agree strongly*" to "*disagree strongly*". The UPPS-P does not provide a total score of impulsivity; instead, impulsivity is subdivided into five subscales. Internal consistency for the community sample was good to high for: Negative Urgency (NU; α = .91), Positive Urgency (PU; α = .95), Lack of Premeditation (LPm; α = .79), Lack of Perseverance (LPs; α = .76), and Sensation Seeking (SS; α = .91). In the prison sample, internal consistency estimates were also good to high: NU (α = .92), PU(α = .92), LPm (α = .85), LPs (α = .82), and SS (α = .86).

2.2.2 Triarchic Psychopathy Measure (TriPM). The TriPM (Patrick, 2010) consists of 58 items and is rated on a four-point Likert scale (0 = "*true*", 1 = "*somewhat true*", 2 = "*somewhat false*", 3 = "*false*"). The TriPM returns scores for the total and the three scales (Boldness, Meanness and Disinhibition). In the community sample, internal consistency values were good for the total score (α = .83) and were acceptable to good for the three subscales Boldness (α = .65), Meanness (α = .79), and Disinhibition (α = .80). In the prison sample, internal consistency was good for the total score (α = .89), acceptable for the Boldness dimension (α = .66), and good to high for Meanness (α = .86) and Disinhibition (α = .90).

2.3 Statistical Approach

Normality was assessed by means of Q-Q plots and visual inspection of the data did not differ greatly from a normal distribution for any of the scales. Table 1 shows the Bonferroni-corrected Pearson correlation coefficients for the relationships among psychopathy, age, and impulsivity-related variables per sample. Relationships between scales were further examined via zero-order correlations, first-order correlations and semi-partial

correlations in regression analyses (alpha level of .01). According to Cohen (1992) a sample of 64 to 67 participants (exceeded by both study groups) is sufficient to detect effects in the medium range with 80 % power and alpha set to .05.

3. Results

3.1 Sample Characteristics

Means and standard deviations for the variables are given in Table 2 for the samples combined and individually. Statistical comparisons of the offender and community samples revealed that the only significant differences obtained from independent samples *t*-tests were that the offender sample reported higher levels of TriPM Disinhibition ($t(104.10) = 3.56$, $p < .001$), whereas the community sample reported higher levels of UPPS-P Sensation Seeking ($t(121.76) = 3.79$, $p < .001$).

3.2 Regression Analyses – Total TriPM scores

Given that age did not correlate with impulsivity or psychopathic traits, age was not included in the regression analyses. The TriPM total score was positively associated with all five UPPS scales. To test for between-group differences in the relationship between total TriPM and the UPPS-P scales (offender vs. community coded via a dummy variable), TriPM scales were *z*-scored, as recommended by Aiken, West, & Reno (1991), and then the interaction term with the group variable was calculated. In the hierarchical regression analysis group (coded as 1 for students and 2 for prisoners) was entered at Stage 1, the TriPM total score at Stage 2, and the interaction term at Stage 3. For NU we found no significant model at Stage 1, a significant increase in ΔR^2 for Stage 2 ($p <.001$), and no significant increase in ΔR^2 for Stage 3. This analysis was repeated for each of the scales of the UPPS-P with an identical pattern of results, with the one exception that the group variable produced a significant model for the prediction of SS at Stage 1 (due to the greater SS scores of the community sample – see Table 2).

3.3 Regression Analyses – Triarchic Model

First, we examined each of the five impulsivity measures by regressing the three scales of the TriPM onto the measure of impulsivity within the combined sample and the individual samples (see Table 3). Second, differences between groups were analysed by means of hierarchical regression.

3.3.1 Negative Urgency. Examination of the significant model predicting NU based on the three TriPM subscales showed that the Disinhibition scale was strongly positively related to NU, whereas the Boldness scale expressed a negative relationship. The Meanness scale was not significant in the regression model and did not have unique predictive value, indicating the lack of a significant association with NU. Those results were nearly identical in prisoners and community participants.

3.3.2 Positive Urgency. Examination of the significant model predicting PU based on the triarchic conceptualization of psychopathy revealed that while both the Meanness and Disinhibition scales were positively related to PU (the former more strongly in the community sample), the Boldness scale did not express a significant correlation and did not add to the model's predictive ability in both samples.

3.3.3 Lack of Premeditation. The regression model predicting LPm from the TriPM scales was significant. Examination of this model showed that both the Meanness and Disinhibition scales were positively related to LPm, whereas the Boldness scale did not express a significant correlation. Similarly to Positive Urgency, the relationship between LPm and Meanness was stronger in the community sample whereas the Boldness and Disinhibition results were similar in both samples.

3.3.4 Lack of Perseverance. Examining the significant model predicting LPs based on the TriPM scores showed that the Meanness scale was positively related to LPs, whereas the Boldness scale expressed a negative correlation. There was no significant contribution

from the Disinhibition scale to the model, despite a significant positive zero-order correlation to LPs. When analysing the relationships between TriPM and UPPS-P scales in the individual samples, the results were similar.

3.3.5 Sensation Seeking. Predicting SS from the scales of the TriPM resulted in significance of the overall model. Further examination showed that both the Boldness scale and the Meanness scale were positively related to SS, whereas there was no significant contribution from the Disinhibition scale to the model fit, nor was there a significant correlation to SS. Similarly to LPs, the results were not affected when the samples were analysed individually.

To examine whether differences between groups in their relationship between impulsivity and TriPM psychopathy were of statistical significance, hierarchical regression was applied. For each of the scales of the UPPS-P we examined the contribution of the nature of the group (offender vs. community) using the same hierarchical regression technique as we did for the total TriPM score, but replacing the predictors with the simultaneous entry of the three TriPM scales at Stage 2 and the interaction between the scales and the group variable at Stage 3.

For NU we found no significant model at Stage 1, a significant increase in ΔR^2 for Stage 2 (p <.001), and no significant increase in ΔR^2 for Stage 3. None of the interaction terms was significant. This pattern of results was repeated for all of the scales of the UPPS-P with the exception that the group variable produced a significant model for the prediction of SS at Stage 1 (due to the larger SS scores of the community sample). Thus, these analyses did not reveal significant differences between the prediction of the UPPS-P variables between the offender and community samples.

4. Discussion

Investigating the relationships between UPPS-P impulsivity and psychopathy as measured via the Triarchic Model showed that at a global level TriPM was predictive of all of UPPS-P scales. Further, these relationships were consistent across both the offender and community samples according to the hierarchical regression analyses. However, the pattern found at the global level, reflecting the TriPM total score, was not repeated for the three subscales of the TriPM, with each showing a unique pattern of associations to the different types of impulsivity.

4.1 Boldness

The regression analysis showed that the Boldness scale was strongly associated with SS, as hypothesised. Boldness, however, was negatively related to NU and to LPs. Hence, high traits of Boldness are associated with few traces of impulsivity as traditionally defined (e.g., acting without thinking when under stress or distress, or failing to persist in tasks). Individuals with traits of Boldness are calm and rational even in emotional situations and are able to stick to a task in the face of other distractions. Further, they thrive on risk-taking situations and are able to take calculated risks and enjoy high-pressure situations which others may find stressful. Similarly, previous research found that high scores on TriPM Boldness are associated with less experienced anxiety and fear (Kyranides, Fanti, Sikki, & Patrick, 2016). Additionally, participants scoring high on the Boldness dimension show normal levels of being able to plan ahead. Similarly, Gray et al. (in preparation) have shown that TriPM Boldness is associated with increased levels of instrumental, but not reactive, violence. Additionally, Boldness has previously been related to increased levels of instrumental risk taking (Rogers, Viding, & Cahamorro-Premuzic, 2013) and on laboratory-based measures of risk taking (Snowden, Smith and Gray, 2017). These results are consistent with the idea of someone who can calculate risks, but chooses to act in the face of such risks in an unemotional and non-impulsive manner. Such a personality type might be advantageous

and adaptive if it is not co-occurring with other traits of psychopathy. Indeed, it has been hypothesised that successful psychopathy relates to high score on the TriPM Boldness dimension and low scores on TriPM Disinhibition (Lilienfeld, Watts, & Smith, 2015).

4.2 Meanness

In line with the hypotheses, the Meanness scale was associated with all UPPS-P scales, although it did not show unique associations to the NU in the hierarchical regression. Hence, individuals with high traits of Meanness tend to act rashly under positive emotional situations, have deficits in thinking about the consequences of their actions, are easily distracted from their plans/tasks, and tend to seek out exciting situations.

Meanness is central to the conception of psychopathy as a forensic/criminal concept and previous research has linked high scores on Meanness to core psychopathic characteristics such as low empathy (Almeida et al., 2015; Sellbom & Phillips, 2013). In line with the current finding of Meanness being associated with increased impulsivity, previous research has found TriPM Meanness to be associated with low behavioural inhibition and heightened levels of aggression (Blagov, Patrick, Oost, Goodman, & Pugh, 2015; Sellbom & Phillips, 2013).

4.3 Disinhibition

In accordance with the hypotheses, the Disinhibition scale had significant associations with all UPPS-P scales, with the exception of SS. However, Disinhibition did not contribute to the prediction of LPs. Hence, individuals with high traits of Disinhibition will tend to act rashly under emotional situations (for both, negative and positive emotional challenges), and have problems in thinking about the consequences of their actions.

The concept of Disinhibition is negatively related to the neurobehavioral dimension of inhibitory control which is thought to constrain rash behaviour and undermine planning ability for long-term goals. Disinhibition is often linked to cognitive control (Alvarez &

Emory, 2006; Knoch & Fehr, 2007; Morgan & Lilienfeld, 2000) and its role as a component in psychopathy has been debated (e.g. Bagshaw, Gray, & Snowden, 2014; Dolan, 2012; Gorenstein, 1982; Hare, 1984). Clearly, deficits in the ability to plan/persevere at a task would be consistent with emerging evidence of orbitofrontal dysfunction in psychopathic offenders. Likewise, there is increasing evidence for frontal lobe function being associated with rash actions under emotional states (Boy et al., 2011). Disinhibition is also thought to be strongly related to externalising psychopathology (Krueger, Markon, Patrick, Benning, & Kramer, 2007) and the TriPM Disinhibition includes items relating to problematic impulsivity, impatient urgency, and deficient planful control (Patrick, 2010). The absence of a positive relationship between UPPS-P SS and TriPM Disinhibition is notable in this context. Previous research on TriPM Disinhibition associated it with more drug and alcohol abuse, as well as a higher tendency to trivialise risky sexual behaviour (Brislin, Drislane, Smith, Edens, & Patrick, 2015; Watts, Bowes, Latzman, & Lilienfeld, 2017). However, UPPS-P SS has a strong emphasis on venturesomeness (e.g. " I'll try anything once") and as such might not tap the risk-taking aspects commonly related to TriPM Disinhibition.

At the zero-order level, few differences between Disinhibition and Meanness emerged in the current investigation, possibly due to similarities in the scales' construction. While both TriPM dimensions relate to diverging concepts, externalising vs. callous-aggression (Patrick, 2010), both subscales are based on items of Krueger et al.'s (2007) Externalising Spectrum Inventory, indexing impulse-related difficulties. As such, similarities in the relationships between impulsivity and the TriPM Meanness and Disinhibition dimensions might be explained by the shared impulse-control nature of the respective items.

4.4 Limitations

The major limitation of the study is its reliance on self-report scales for both its measure of psychopathy and for assessing the different forms of impulsivity. When

investigating prison samples, it is always doubtful to what extent obtained responses reflect an objective measure of personality traits and personal abilities (Kelsey, Rogers, & Robinson, 2014; Young-Lundquist, Boccaccini, & Simpler, 2012). However, meta-analytic evidence suggests that psychopathic traits are not consistently related to increased manipulation of responses in self-report assessments (Ray et al., 2013). Clearly, it would be of value to look at clinician-based models of psychopathy in relation to the UPPS. Further, the offender sample likely did not only contain participants reaching the cut-off for psychopathy as ascribed to the PCL-R. However, psychopathy is commonly seen as a dimensional construct instead of being of categorical nature (Walters et al., 2007). In light of this, a dimensional approach (regression) has been taken, which requires psychopathic traits to be expressed across the full range of severity. However, between-group differences might be more pronounced when comparing psychopathic participants reaching the PCL-R cut-off to community participants. An additional limitation was that the samples were not matched for age. However, age was not correlated with any of the UPPS-P and TriPM subscales and age differences between samples are therefore unlikely to have influenced the results. The final limitation relates to the obtained sample sizes. While comparable to previous offender samples utilizing the UPPS-P or the TriPM (e.g., Ray et al., 2009; Stanley et al., 2013), the obtained sample size falls somewhat behind other studies on community participants (e.g., Cyders, 2013; Sica et al., 2015). Given that sample size was kept comparable across prison and community samples, both samples were similarly affected by this limitation. An arising issue from the medium sample size is that we were unlikely to identify links between impulsivity and psychopathic traits that are represented by small effect sizes.

4.5 Conclusion

As stated by Poythress and Hall (2011) the long-standing consensus that "*psychopaths are impulsive*" needs to be reconsidered. We show that clearer definitions and multi-faceted

exploration of what is meant by “impulsive” lead to a different formulation of problems with inhibitory control hypothesised to underpin the psychopathic disorder. Notably, some forms of impulsivity (NU, LPs) were negatively related to the Boldness dimension of psychopathy. Indeed, there was no type of impulsivity that was consistently related to all dimensions of psychopathy as conceptualised by the TriPM. Our findings suggest that the assessment of impulsivity needs to include a more sophisticated and multifaceted approach to evaluate the management and treatment of offenders with psychopathic traits.

References

Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions.* Sage.

Almeida, P. R., Seixas, M. J., Ferreira-Santos, F., Vieira, J. B., Paiva, T. O., Moreira, P. S., & Costa, P. (2015). Empathic, moral and antisocial outcomes associated with distinct components of psychopathy in healthy individuals: a Triarchic model approach. *Pers. Individ. Differ., 85*, 205-211.

Alvarez, J. A., & Emory, E. (2006). Executive function and the frontal lobes: a meta-analytic review. *Neuropsychol. Rev., 16*, 17-42.

Bagshaw, R., Gray, N. S., & Snowden, R. J. (2014). Executive function in psychopathy: The Tower of London, Brixton Spatial Anticipation and the Hayling Sentence Completion Tests. *Psychiatry Res., 220*, 483-489.

Berg, J. M., Hecht, L. K., Latzman, R. D., & Lilienfeld, S. O. (2015). Examining the Correlates of the Coldheartedness Factor of the Psychopathic Personality Inventory–Revised. *Psychol. Assess., 27*, 1494 -1499.

Blagov, P. S., Patrick, C. J., Oost, K. M., Goodman, J. A., & Pugh, A. T. (2015). Triarchic psychopathy measure: Validity in relation to normal-range traits, personality pathology, and psychological adjustment. *J. Pers. Disord., 29*, 182-193.

Blaszczynski, A., Steel, Z., & McConaghy, N. (1997). Impulsivity in pathological gambling: the antisocial impulsivist. *Addiction, 92*, 75-87.

Boy, F., Evans, C. J., Edden, R. A., Lawrence, A. D., Singh, K. D., Husain, M., & Sumner, P. (2011). Dorsolateral Prefrontal Gamma-Aminobutyric Acid in Men Predicts Individual Differences in Rash Impulsivity. *Biol. Psychiatry, 70*, 866-872.

Brislin, S. J., Drislane, L. E., Smith, S. T., Edens, J. F., & Patrick, C. J. (2015). Development and validation of triarchic psychopathy scales from the Multidimensional Personality Questionnaire. *Psychol. Assess., 27*, 838.

Cima, M., & Raine, A. (2009). Distinct characteristics of psychopathy relate to different subtypes of aggression. *Pers. Individ. Differ., 47*, 835-840.

Cohen, J. (1992). A power primer. *Psychol. Bull.*, *112,* 155-159.

Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: towards a hierarchical model. *Psychol. Assess., 13*, 171.

Copestake, S., Gray, N. S., & Snowden, R. J. (2011). A comparison of a self-report measure of psychopathy with the Psychopthy Checklist-Revised in a UK sample of offenders. *J Forens Psychiatry Psychol., 22*, 169-182.

Cyders, M. A. (2013). Impulsivity and the sexes: measurement and structural invariance of the UPPS-P Impulsive Behavior Scale. *Assessment, 20*, 86-97.

Cyders, M. A., & Coskunpinar, A. (2012). The relationship between self-report and lab task conceptualizations of impulsivity. *J Res. Pers., 46*, 121-124.

Dolan, M. (2012). The neuropsychology of prefrontal function in antisocial personality disordered offenders with varying degrees of psychopathy. *Psychol. Med., 42*, 1715-1725.

Gatner, D. T., Douglas, K. S., & Hart, S. D. (2016). Examining the Incremental and Interactive Effects of Boldness With Meanness and Disinhibition Within the Triarchic Model of Psychopathy. *Personal. Disord., 7*, 259-268.

Gorenstein, E. E. (1982). Frontal lobe functions in psychopaths. *J Abnorm. Psychol., 91,* 368-379.

Hare, R. D. (1984). Performance of Psychopaths on Cognitive Tasks Related to Frontal Lobe Function. *J Abnorm. Psychol., 93*, 133-140.

Hare, R. D. (1991). *The Hare Psychopathy Checklist-Revised.* Toronto, ON: Multi-Health Systems.

Harpur, T. J., Hakstian, A. R., & Hare, R. D. (1988). Factor structure of the Psychopathy Checklist. *J. Consult. Clin. Psychol., 56*, 741-747.

Harris, G. T., Rice, M. E., Hilton, N. Z., Lalumiere, M. L., & Quinsey, V. L. (2007). Coercive and precocious sexuality as a fundamental aspect of psychopathy. *J Pers. Dis., 21*, 1-27.

Kelsey, K. R., Rogers, R., & Robinson, E. V. (2014). Self-Report Measures of Psychopathy: What is their Role in Forensic Assessments? *J Psychopathol. Behav., 37,* 380-391.

Knoch, D., & Fehr, E. (2007). Resisting the power of temptations. *Ann. N. Y. Acad. Sci., 1104*, 123-134.

Krueger, R. F., Markon, K. E., Patrick, C. J., Benning, S. D., & Kramer, M. D. (2007). Linking antisocial behavior, substance use, and personality: An integrative quantitative model of the adult externalizing spectrum. *J Abnorm. Psychol., 116*, 645-666.

Kyranides, M. N., Fanti, K. A., Sikki, M., & Patrick, C. J. (2016). Triarchic Dimensions of Psychopathy in Young Adulthood: Associations With Clinical and Physiological Measures After Accounting for Adolescent Psychopathic Traits.

Lilienfeld, S. O., Watts, A. L., & Smith, S. F. (2015). Successful Psychopathy: A Scientific Status Report. *Curr. Dir. Psychol. Sci., 24*, 298-303.

Lilienfeld, S. O., & Widows, M. R. (2005). *Psychopathic Personality Inventory. Revised: Professional Manual*. Lutz, FL: Psychological Assessment Resources, Inc.

Lynam, D. R., Smith, G. T., Whiteside, S. P., & Cyders, M. A. (2006). The UPPS-P: Assessing five personality pathways to impulsive behavior. *West Lafayette, IN: Purdue University*

Miller, J. D., Watts, A. L., & Jones, S. E. (2011). Does psychopathy manifest divergent relations with components of its nomological network depending on gender? *Pers. Individ. Differ., 50*, 564-569.

Morgan, A. B., & Lilienfeld, S. O. (2000). A meta-analytic review of the relation between antisocial behavior and neuropsychological measures of executive function. *Clin. Psychol. Rev., 20*, 113-136.

Neumann, C. S., Hare, R. D., & Pardini, D. A. (2015). Antisociality and the Construct of Psychopathy: Data From Across the Globe. *J Pers., 83*, 678-692.

Patrick, C. J. (2010). Operationalizing the Triarchic Conceptualization of Psychopathy: Preliminary Description of Brief Scales for Assessment of Boldness, Meanness, and Disinhibition. *Unpublished test manual, Florida State University Tallahassee, FL.*

Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor Structure of the Barratt Impulsiveness Scale. *J. Clin. Psychol., 51*, 768-774.

Poythress, N. G., & Hall, J. R. (2011). Psychopathy and impulsivity reconsidered. *Aggress. Violent Behav., 16*, 120-134.

Ray, J. V., Hall, J., Rivera-Hudson, N., Poythress, N. G., Lilienfeld, S. O., & Morano, M. (2013). The relation between self-reported psychopathic traits and distorted response styles: A meta-analytic review. *J Pers. Dis., 4*, 1-14.

Ray, J. V., Poythress, N. G., Weir, J. M., & Rickelm, A. (2009). Relationships between psychopathy and impulsivity in the domain of self-reported personality features. *Pers. Individ. Differ., 46*, 83-87.

Rogers, J., Viding, E., & Cahamorro-Premuzic, T. (2013). Instrumental and disinhibited financial risk taking: Personality and behavioural correlates *Pers. Individ. Differ., 55*, 645-649.

Sellbom, M., & Phillips, T. R. (2013). An examination of the triarchic conceptualization of psychopathy in incarcerated and nonincarcerated samples. *J Abnorm. Psychol., 122*, 208-214.

Sellbom, M., Wygant, D. B., & Drislane, L. E. (2015). Elucidating the construct validity of the psychopathic personality inventory triarchic scales. *J. Pers. Assess., 97*, 374-381.

Sica, C., Drislane, L., Caudek, C., Angrilli, A., Bottesi, G., Cerea, S., & Ghisi, M. (2015). A test of the construct validity of the Triarchic Psychopathy Measure in an Italian community sample. *Pers. Individ. Differ., 82*, 163-168.

Snowden, R. J., & Gray, N. S. (2011). Impulsivity and psychopathy: associations between the Barrett impulsivity scale and the Psychopathy Checklist Revised. *Psychiatry Res., 187*, 414-417.

Snowden, R. J., Smith, C. & Gray, N. S. (2017). Risk taking and the triarchic model of psychopathy. *J. Clin.Exp. Neuropsyc.,* http://dx.doi.org/10.1080/13803395.2017.1300236

Stanley, J. H., Wygant, D. B., & Sellbom, M. (2013). Elaborating on the Construct Validity of the Triarchic Psychopathy Measure in a Criminal Offender Sample. *J Pers. Assess., 95*, 343-350.

Sylvers, P., Landfield, K. E., & Lilienfeld, S. O. (2011). Heavy episodic drinking in college students: associations with features of psychopathy and antisocial personality disorder. *J Am. Coll. Health, 59*, 367-372.

Varlamov, A., Khalifa, N., Liddle, P., Duggan, C., & Howard, R. (2011). Cortical Correlates of Impaired Self-Regulation in Personality Disordered Patients with Traits of Psychopathy. *J Pers. Dis., 25*, 75-88.

Venables, N. C., Hall, J. R., & Patrick, C. J. (2014). Differentiating psychopathy from antisocial personality disorder: A triarchic model perspective. *Psychol. Med., 44*, 1005-1013.

Walters, G. D., Gray, N. S., Jackson, R. L., Sewell, K. W., Rogers, R., Taylor, J., & Snowden, R. J. (2007). A taxometric analysis of the Psychopathy Checklist: Screening Version (PCL:SV): further evidence of dimensionality. *Psychol. Assess., 19*, 330-339.

Watts, A. L., Bowes, S. M., Latzman, R. D., & Lilienfeld, S. O. (2017). Psychopathic traits predict harsh attitudes toward rape victims among undergraduates. *Pers. Individ. Differ., 106*, 1-5.

Whiteside, S. P., & Lynam, D. R. (2001). The Five Factor Model and impulsivity: using a structural model of personality to understand impulsivity. *Pers. Individ. Differ., 30*, 669-689.

Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). Capturing the Four-Factor Structure of Psychopathy in College Students Via Self-Report. *J Pers. Assess., 88*, 205-219.

Woodworth, M., & Porter, S. (2002). In cold blood: characteristics of criminal homicides as a function of psychopathy. *J Abnorm. Psychol., 111*, 436-445.

Young-Lundquist, B. A., Boccaccini, M. T., & Simpler, A. (2012). Are self-report measures of adaptive functioning appropriate for those high in psychopathic traits? *Behav. Sci. Law, 30*, 693-709.

Table 1

Table 1.

Pearson Correlation Coefficients of the Individual Samples on Psychopathy and Impulsivity Scores

	UPPS-P NU	UPPS-P PU	UPPS-P LPm	UPPS-P LPs	UPPS-P SS	TriPM Total	TriPM Boldness	TriPM Meanness	TriPM Disinhibition
UPPS-P PU	**.67***	-							
	.68*								
UPPS-P LPm	**.58***	**.42***	-						
	.38*	**.40***							
UPPS-P LPs	**.54***	.37	**.57***	-					
	.31	.13	.20						
UPPS-P SS	.32	**.42***	.25	.07	-				
	.05	.23	**.37***	-.13					
TriPM Total	**.54***	**.56***	.37	.35	**.62***	-			
	.35	**.56***	**.55***	.25	**.41***				
TriPM Boldness	-.25	-.06	-.22	-.35	**.39***	**.41***	-		
	-.28	.07	.11	-.26	**.44***	**.57***			
TriPM Meanness	**.43***	**.47***	.32	**.39***	**.56***	**.88***	.35	-	
	.26	**.50***	**.56***	.32	**.35***	**.86***	**.37***		
TriPM Disinhibition	**.72***	**.63***	**.50***	**.50***	**.43***	**.82***	-.09	**.58***	**-**
	.68*	**.49***	**.49***	**.42***	.12	**.71***	-.06	**.48***	
Age	-.26	-.13	-.23	-.20	-.22	-.19	.09	-.10	-.30
	-.06	-.07	.06	-.04	.03	.00	.17	-.04	-.11

Note. Shown are the Pearson Correlation Coefficients for each sample, prisoners (black colour; top) and students (grey colour; bottom). Bonferroni-corrected significant correlations ($p < .0014$) are shown in bold and denoted by *. UPPS-P related abbreviations are PU = Positive Urgency, NU = Positive Urgency, LPm = Lack of Premeditation, LPs = Lack of Perseverance, SS = Sensation Seeking.

Table 2

Table 2.

Descriptive Statistics of the Combined as well as the Individual Samples on Psychopathy and Impulsivity Scores

		Combined Sample (N = 149)		Offender Sample (N = 68)		Community Sample (N = 81)	
		M	*SD*	*M*	*SD*	*M*	*SD*
TriPM	Total	121.9	17.7	122.8	20.9	121.1	14.7
	Boldness	48.3	6.6	47.1	6.7	49.3	6.3
	Meanness	34.7	7.7	33.5	8.7	35.8	6.7
	Disinhibition	38.9	10.7	**42.3****	12.7	**36.0** **	7.5
UPPS-P	NU	27.9	8.1	27.9	8.7	27.8	7.6
	PU	26.3	8.7	24.6	8.0	27.8	9.0
	LPm	21.6	5.0	21.7	5.6	21.4	4.6
	LPs	19.8	4.6	18.9	4.8	20.5	4.3
	SS	33.6	7.3	**31.2****	8.0	**35.6** **	5.9

Note. Shown are the means (*M*) and standard deviations (*SD*) in the combined sample, consisting of prisoners and students, as well as in each individual sample. UPPS-P-related abbreviations refer to the subscales Negative Urgency (NU), Positive Urgency (PU), Lack of Premeditation (LPm), Lack of Perseverance (LPs) and Sensation Seeking (SS). Significant differences between samples are indicated by ** referring to $p < .001$

Table 3

Table 3.

Outcomes of the Linear Regressions predicting UPPS-P Impulsivity based on the TriPM Scores within the Combined and Individual Samples.

		Sample	Model R	TriPM Boldness		TriPM Meanness		TriPM Disinhibition	
				beta	semi	beta	semi	beta	semi
UPPS-P	NU	Combined	**.71****	**-.27****	**-.23****	.20	.15	**.54****	**.45****
		Offender	**.75****	**-.25***	**-.22***	.16	.12	**.61****	**.46****
		Community	**.73****	**-.27***	**-.24***	.06	.04	**.64****	**.54****
	PU	Combined	**.58****	-.06	-.05	**.37****	**.29****	**.31****	**.26****
		Offender	**.65****	-.09	-.08	.21	.15	**.50****	**.38****
		Community	**.64****	-.02	-.02	**.30***	**.23***	**.44****	**.37****
	LPm	Combined	**.54****	-.15	-.13	**.33****	**.26****	**.30****	**.25****
		Offender	**.55****	-.25	-.22	.20	.14	.36	.27
		Community	**.62****	-.05	-.04	**.46****	**.36****	.26	.22
	LPs	Combined	**.58****	**-.44****	**-.38****	**.49****	**.38****	.10	.08
		Offender	**.66****	**-.48****	**-.42****	**.44***	**.31***	.20	.15
		Community	**.56****	**-.38****	**-.34****	**.36***	**.28***	.22	.18
	SS	Combined	**.57****	**.32****	**.28****	**.33****	**.26****	.09	.07
		Offender	**.64****	**.31***	**.27***	.29	.21	.29	.22
		Community	**.49****	**.38***	**.36***	.18	.14	.06	.05

Note. UPPS-P-related abbreviations refer to the subscales Negative Urgency (NU), Positive Urgency (PU), Lack of Premeditation (LPm), Lack of Perseverance (LPs) and Sensation Seeking (SS). The standardized coefficients (beta) derived from the linear regression are shown, predicting individual UPPS-P subscales from the triarchic model of psychopathy. Semi indicates the semi-partial correlations. Significance levels are indicated by * ($p < .01$) and ** ($p < .001$).

Acknowledgements

We thank the National Offender Management Service as well as the staff and offender population at HMP Channings Wood, where some of this research was conducted. Ethical approval was granted by Ethical Committee of Swansea University. (11.23.2014.2), Cardiff University (EC.14.05.13.3794) and by the Ministry of Justice National Offender Management Service (ref 2014-096).